

1. (Amended) A method of extracting nucleic acids from a material containing nucleic acids using a nucleic acid-binding particulate carrier which contains silica or its derivative. The method comprising the steps of:

C1 (a) mixing the material containing nucleic acids, a nucleic acid-binding particulate carrier having a particle diameter of 0.5 to 15.0 μm , a pore diameter of 80 to 250 nm and a pore volume of 0.2 to 5 ml/g, and a nucleic acid extraction solution for allowing the nucleic acids to adsorb to the particulate carrier, to thereby bind the nucleic acids to the particulate carrier, the nucleic acids being bound to the silica particulate carrier via hydrogen bonds formed between hydroxyl groups on the particle surfaces of the carrier and bases of the nucleic acids;

(b) separating a composite of the nucleic acids and the particulate carrier from the mixture obtained in Step (a) to remove contaminants; and

(c) eluting and collecting the nucleic acids from the composite of the nucleic acids and the particulate carrier.

C2 3. (Amended) A method according to Claim 1 wherein the particulate carrier containing silica or its derivative is a magnetic particulate carrier.

C3 12. (Amended) A method according to Claim 1 wherein the nucleic acid extraction solution contains a chaotropic substance.

C4 15. (Amended) A method according to Claim 1 wherein the composite of the nucleic acid and the particulate carrier obtained in Step (b) is washed with a first washing solution containing a chaotropic substance and a second washing solution containing alcohol.

CS 18. (Amended) A method according to Claim 1 wherein the composite of the nucleic acid and the particulate carrier obtained in Step (b) is washed with a washing solution containing ethanol at a concentration of 70% and a washing solution containing ethanol at a concentration of 99%.

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Cancel Claims 2 and 24.